THRON™

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RULE YOUR DIGITAL CONTENT

VIRTUAL ACCELERATOR - Datasheet
Release number: 1.0
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1 Installation requirements

This version of Accelerator comes with two different configurations: MASTER and SLAVE. Typically the MASTER is installed within an headquarter while SLAVES are installed within stores or branch offices.
To ensure the proper functioning of Virtual Accelerator, the following hardware configurations are required:

Type	Characteristics
Master	1TB disk 8GB RAM 4 CPU 2 NIC (one for management and one for ordinary operations)
Slave	250GB disk 4GB RAM 2CPU 1 NIC

Virtual Accelerator can be installed in the following environments:

- VMWare Workstation 8 and later
- VMWare Player 6 and later
- VSphere ESXi 5.5 and later

In order to make the appliance to properly accelerate contents, corporate DNS server must submit DNS queries for the domains to be accelerated directly to the Accelerator (specifically towards the assigned static IP). For a proper functioning the appliance must be connected to the internet. Specifically, it will have to use the following ports:

Transport	Application protocol	Port	Purpose	Notes
TCP	HTTP	80	Download/streaming of contents from the Internet	
TCP	HTTP/SSL	443	Secure remote access for technical support	
TCP	HTTP	3128	Communication with other accelerators (in case of multi-appliance configuration)	It is required if there is a network that needs a star or tree appliances configuration. Accelerators must therefore be mutually reached on this port.
UDP	DNS	53	Domain name resolution	Ability to set a local DNS server. If this server redirects the query domain of the installed appliance it triggers a request loop.

UDP/TCP	DAYTIME/NTP	13/123	Time sync	Ability to set a NTP local server

THRON Accelerator must be configured with NTP server and local network DNS.

2 Use of proxy for browsing the net

Accelerator can be configured to access the Internet whether directly or through a proxy. In case internet access takes place via a proxy requiring authentication, you can configure THRON Accelerator to authenticate with:
- Basic authentication
- NTLM

Important:
If Internet access is configured to use a proxy, the DNS server in use must not submit the accelerated domain queries to the appliance.
In case Internet access is through a proxies tree, all proxies accessing the internet directly from the branch where THRON Accelerator is positioned should use as reference DNS one that does not forward the accelerated domain queries to THRON Accelerator.

3 Remote assistance

In order to perform maintenance or remote assistance a reverse VPN can be enabled. Connection always starts from the appliance towards the server and it takes place through an SSL protocol towards TCP port 443.

Important:
The failure caused by an incorrect configuration of the VPN network will prevent maintenance and remote assistance for the installed devices.
In this case it will be necessary to request on-site intervention of a technician.

4 Security

THRON Accelerator leverages an operating system based on Linux Server. The operating system which is installed without a GUI, comes on a suitably optimized version, in order to have maximum performance and security on the provided services. This feature allows you to arrange distribution towards the Internet with a different interface compared to that used by Internet traffic, thus preventing your network from potential attacks coming from the Internet.
THRON Accelerator does not need to have services exposed towards the Internet because all connections with the server are initiated by the appliance itself, including VPN activation.

4.1 Physical access

You can easily access the appliance by connecting a monitor and a keyboard. Then via text console (no GUI) you can acquire superuser privileges. However, access is allowed only to system users protected by password. All users are divided into groups so that you can differentiate privileges.
Passwords must comply the following requirements:
- must contain lowercase
- must contain uppercase
- must contain a number
- minimum length: 8 characters

4.2 Services

For proper operation of the appliance, it needs to access external services:
- NTP: in order to keep system time updated
- DNS: for naming resolution if a company DNS is not present
- HTTP-HTTPS-SSL:
  - To receive appliance updates. Updates are not applied automatically by the operating system and they are the result of an automated processes controlled by THRON Accelerator software
  - To manage VPN
  - To notify its state to the servers, in order to facilitate monitoring
  - For downloading and streaming of contents for local distribution

All services that THRON Accelerator is capable of delivering are listening only on the intranet oriented interface.
THRON Accelerator was engineered thinking about security management, so all connections are always initiated by the appliance towards the internet thus making it possible to place it behind a NAT server or other Firewalls.
VPN is used for any assistance activities. The channel is protected by credentials and the traffic is encrypted using SSL. VPN connection is not always on, but is activated on demand by the central THRON platform.

4.3   Protocols and services

It supports the following protocols: http, http streaming
It delivers the following services:
- SSH TCP 22
  - restricted access to the service
- DNS TCP/UDP 53
- NTP UDP 123
- HTTP TCP 80
- HTTP TCP 10000 (configuration interface)
  - restricted access to the service
  - can be accessed ONLY with system credentials
  - limitations according to belonging groups of the authenticated user

Accelerated domains
- *.weebo.it
- *.thron.com